

Application Serial No. 10/076,335
Amendment C - Reply to Non-Final Office Action of January 12, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the above-identified application:

Listing of Claims:

1. **(Currently Amended)** A method for determining a position of an electronic device within a wide area network, said method comprising:
 - distributing a tracing tool to a first network element within said wide area network;
 - detecting a physical separation of said electronic device and an associated user;
 - determining identifying indicia of said electronic device, wherein said identifying indicia are automatically transmitted by said electronic device during communication between said electronic device and a second network element of said wide area network;
 - monitoring traffic on said wide area network utilizing said tracing tool, wherein said monitoring comprises
 - intercepting data of said communication between said electronic device and said second network element including said identifying indicia in response to detecting said physical separation; and
 - determining a physical position of said electronic device within said wide area network in response to an interception of said identifying indicia, ~~wherein determining said physical position of said electronic device comprises~~
 - ~~transmitting a link tracing message between said electronic device and said first network element;~~
 - ~~identifying a network element coupled between said electronic device and said first network element in response to a transmission of said link tracing message; and~~
 - ~~determining said physical position of said electronic device utilizing said network element coupled between said electronic device and said first network element.~~

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2. (Previously Presented) The method of claim 21, wherein said distributing further comprises distributing said tracing tool to a plurality of Internet protocol routers within said wide area network.
3. (Previously Presented) The method of claim 1, wherein determining said identifying indicia of said electronic device comprises:
 - identifying data transmitted by said electronic device prior to said physical separation utilizing a portion of said wide area network; and
 - extracting said identifying indicia from data transmitted by said electronic device prior to said physical separation.
4. (Previously Presented) The method of claim 1, wherein determining said identifying indicia of said electronic device comprises determining a media access control (MAC) address of said electronic device.
5. (Previously Presented) The method of claim 1, wherein determining said identifying indicia of said electronic device comprises:
 - determining said identifying indicia utilizing at least one of a hostname and an Internet Protocol (IP) address within data transmitted by said electronic device prior to said physical separation utilizing a portion of said wide area network.
6. (Canceled)
7. (Previously Presented) The method of claim 1, wherein said method further comprises causing data specifying said identifying indicia to be stored within a database associated with said first network element prior to said physical separation, and determining said identifying indicia of said electronic device comprises determining said identifying indicia utilizing said database.
8. (Previously Presented) The method of claim 1, said method further comprising generating a notification indicating said physical position of said electronic device for a responsible party associated with said electronic device.

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9. **(Currently Amended)** A system for determining a position of an electronic device within a wide area network, said system comprising:

a hardware fingerprint server to determine identifying indicia of said electronic device, wherein said identifying indicia are automatically transmitted by said electronic device during communication between said electronic device and a first network element of said wide area network;

a monitoring server to detect a physical separation of said electronic device and an associated user and further to monitor traffic on said wide area network at said data processing system, wherein said monitoring server comprises an intercept module to intercept data of said communication between said electronic device and said first network element including said identifying indicia in response to a detection of said physical separation; and

a tracing server to determine a physical position of said electronic device within said wide area network in response to an interception of said identifying indicia at said interception module, ~~wherein said tracing server is configured to transmit a link tracing message between said electronic device and said first network element;~~

~~identify a network element coupled between said electronic device and said first network element in response to a transmission of said link tracing message; and~~

~~determine said physical position of said electronic device utilizing said network element coupled between said electronic device and said first network element.~~

10. **(Canceled)**

11. **(Previously Presented)** The system of claim 9, wherein said hardware fingerprint server is configured to

identify data transmitted by said electronic device prior to said physical separation utilizing a portion of said wide area network; and

extract said identifying indicia from said data transmitted by said electronic device prior to said physical separation.

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12. (Previously Presented) The system of claim 9, wherein said identifying indicia of said electronic device comprises a media access control (MAC) address of said electronic device.

13-20 (Canceled)

21. (Previously Presented) The method of claim 1, wherein said distributing comprises distributing said tracing tool to a plurality of network elements within said wide area network.

22. (Canceled)

23. (Previously Presented) The system of claim 9, wherein said monitoring server is distributed among a plurality of network elements within said wide area network.

24. (Currently Amended) A machine-readable medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to perform a method for determining a position of an electronic device within a wide area network comprising:

distributing a tracing tool to a first network element within said wide area network;

detecting a physical separation of said electronic device and an associated user;

determining identifying indicia of said electronic device, wherein said identifying indicia are automatically transmitted by said electronic device during communication between said electronic device and a second network element of said wide area network;

monitoring traffic on said wide area network at said first network element utilizing said tracing tool, wherein said monitoring comprises

intercepting data of said communication between said electronic device and said second network element including said identifying indicia in response to detecting said physical separation; and

determining a physical position of said electronic device within said wide area network in response to an interception of said identifying indicia, ~~wherein determining said physical position of said electronic device comprises~~

~~transmitting a link tracing message between said electronic device and said first network element;~~

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~~identifying a network element coupled between said electronic device and said first network element in response to a transmission of said link tracing message; and~~

~~determining said physical position of said electronic device utilizing said network element coupled between said electronic device and said first network element.~~

25. (Previously Presented) The machine-readable medium of claim 24, wherein said distributing comprises distributing said tracing tool to a plurality of network elements within said wide area network.

26. (Previously Presented) The machine-readable medium of claim 24, wherein determining said identifying indicia of said electronic device comprises:

identifying data transmitted by said electronic device prior to said physical separation utilizing a portion of said wide area network; and
extracting said identifying indicia from said data transmitted by said electronic device prior to said physical separation.

27. (Previously Presented) The machine-readable medium of claim 24, wherein determining said identifying indicia of said electronic device comprises determining a media access control address of said electronic device.

28. (Canceled)

29. (New) The method of claim 1, wherein determining said physical position of said electronic device within said wide area network in response to said interception of said identifying indicia comprises:

transmitting a link tracing message between said electronic device and said first network element;

identifying a network element coupled between said electronic device and said first network element in response to a transmission of said link tracing message; and
determining said physical position of said electronic device utilizing said network element coupled between said electronic device and said first network element.

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30. (New) The machine-readable medium of claim 24, wherein determining said physical position of said electronic device within said wide area network in response to said interception of said identifying indicia comprises:

transmitting a link tracing message between said electronic device and said first network element;

identifying a network element coupled between said electronic device and said first network element in response to a transmission of said link tracing message; and
determining said physical position of said electronic device utilizing said network element coupled between said electronic device and said first network element.